

Polycom® KIRK ISDN Interface Card

User Guide



1. Introduction

As alternative to the analogue interface to the PBX from the KIRK telecom solutions, the interface can now be digital according to the ISDN standard.

Note: For more information about the PBX setup, please contact your local PBX installer.

The 2 Mbps KIRK ISDN Interface Card performs a 32 channel digital interface. An advantage of using ISDN interface is that an ISDN interface provides signal speech channel concentration, leading to a much better usage of the interface capacity. One single card is sufficient to serve the entire installation.

A KIRK Wireless Server 1500 equipped with a single KIRK ISDN Interface Card handles up to 350 handsets. When linking two KIRK Wireless Servers the maximum capacity of the system will be increased to 700 handsets.

The KIRK ISDN Interface Card has been successfully tested in connection with different brands of PBX's. The protocols available are QSIG ver.3.0 and NET5. Please see the white list on our website.

Note: Handling of the KIRK Wireless Server with the KIRK ISDN Interface Card can only be done from the Administration Program version 8.09 or higher. The system also needs a 28 digit pin code which you can get from KIRK telecom Sales Support.

Documentation

The KIRK ISDN Interface Card is preloaded with the QSIG ver.3.0 or NET5 protocol. The following documents and software are available for download.

Documents

- KIRK ISDN Interface Card Installation Guide
- KIRK ISDN Interface Card User's Guide (this document)

<http://www.kirktelecom.com/company/suk169.asp>

Software

- QSIG protocol (1410 2500)
- QSIG protocol (1410 9800) for use with SAMSUNG PBX
- NET5 protocol (1405 6515)
- KIRK Wireless Server Flash Code (1330 0180).KTB
- Administration Software for ISDN IWU
- Administration Software for KIRK Wireless Server 1500 version 8.04 or higher

Click [here](#) to download software.

2. Setting up the KIRK ISDN Interface Card

The KIRK ISDN Interface Card must be installed in Slot 0 (closest to AC main plug). Please refer to the KIRK ISDN Interface Card Installation Guide for more information about the installation of the KIRK ISDN Interface Card.

The KIRK ISDN Interface Card is connected to the PBX/Network with a RJ45 plug and the connection is as follows:

- 3: RxA
- 4: TxA
- 5: TxB
- 6: RxB

The PBX/Network must be set to **Master** with **Layer2 CRC check turned on**.

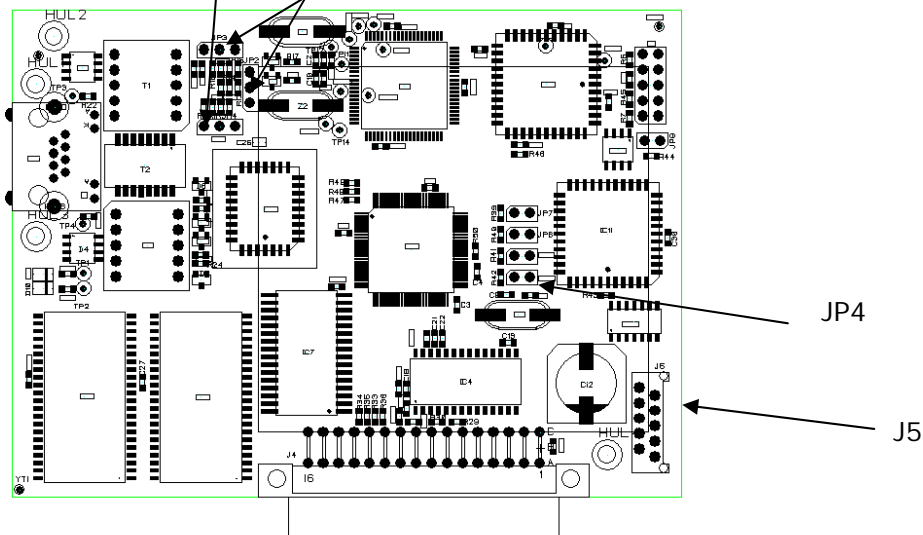
The default impedance of the KIRK ISDN Interface Card is: 120 Ω .

2.1 Changing Impedance of the KIRK ISDN Interface Card

If your PBX/Network is using a different impedance than 120 Ω , you can change the impedance of the KIRK ISDN Interface Card using the jumpers (JP) on the card. See table below.

JP1, JP2 and JP3 is used to select receive line impedance = 120/100/75 ohms.

Impedance	JP1	JP2	JP3
120	No jumper	No jumper	No jumper
100	2 - 3	1 - 2	2 - 3
75	1 - 2	2 - 3	1 - 2



Preparing the KIRK Wireless Server 1500 for Use

When preparing the KIRK Wireless Server 1500 for use it is necessary to use the Administration Program. In the Administration Program you change the flash software, register users, allow subscription of handsets and type the required pin code.

- 1 Open the Administration Program version 8.09 or higher to change the flash software.

The Administration Program window appears.

The screenshot shows the 'CCFP Administration Program' window with the 'MSF' tab selected. The 'MSF Status' and 'ISDN Registration' tabs are also visible. The 'Number of Allowed Users' is 64. A table lists users with columns: Serial No., AC No., Local No., Standby text, PPID, and CCFP. The table contains three rows of data.

	Serial No.	AC No.	Local No.	Standby text	PPID	CCFP
1	00077 0190256		300	ISDN 300	0	Solo/Master
2	00077 0624582		301	ISDN 301	1	Solo/Master
3	00077 0191287		302	test	2	Solo/Master
4						
5						
6						
7						

Buttons: Read All Users, Create All Users, Delete All Users

Get User section: Local No. dropdown, text input, Get User button

Current User Data section: Serial No., AC No., Local No., Standby text, PPID, CCFP, Part number, PCS. CCFP dropdown is set to 'Solo (0)'. Buttons: Create, Delete, Edit.

- 2 Under **Options**, click **Preferences**.

The screenshot shows the 'Preferences' window with the 'Advanced Options' tab selected. The 'Allow Subscription' checkbox is unchecked. There are buttons for 'Block New Calls', 'Allow New Calls', 'Backup EEPROM Data to PC', 'Restore EEPROM Data to CCFP', 'Clear Master EEprom', 'Transfer Flash Code to CCFP', 'Change Password', 'Restart System', 'Enter Pin Code', 'Pin Code Status', and 'Set I/WU Card to Default settings'. The 'Retrive Default I/WU Settings' section has 'I/WU Card' set to 'All' and 'Default Codes' selected.

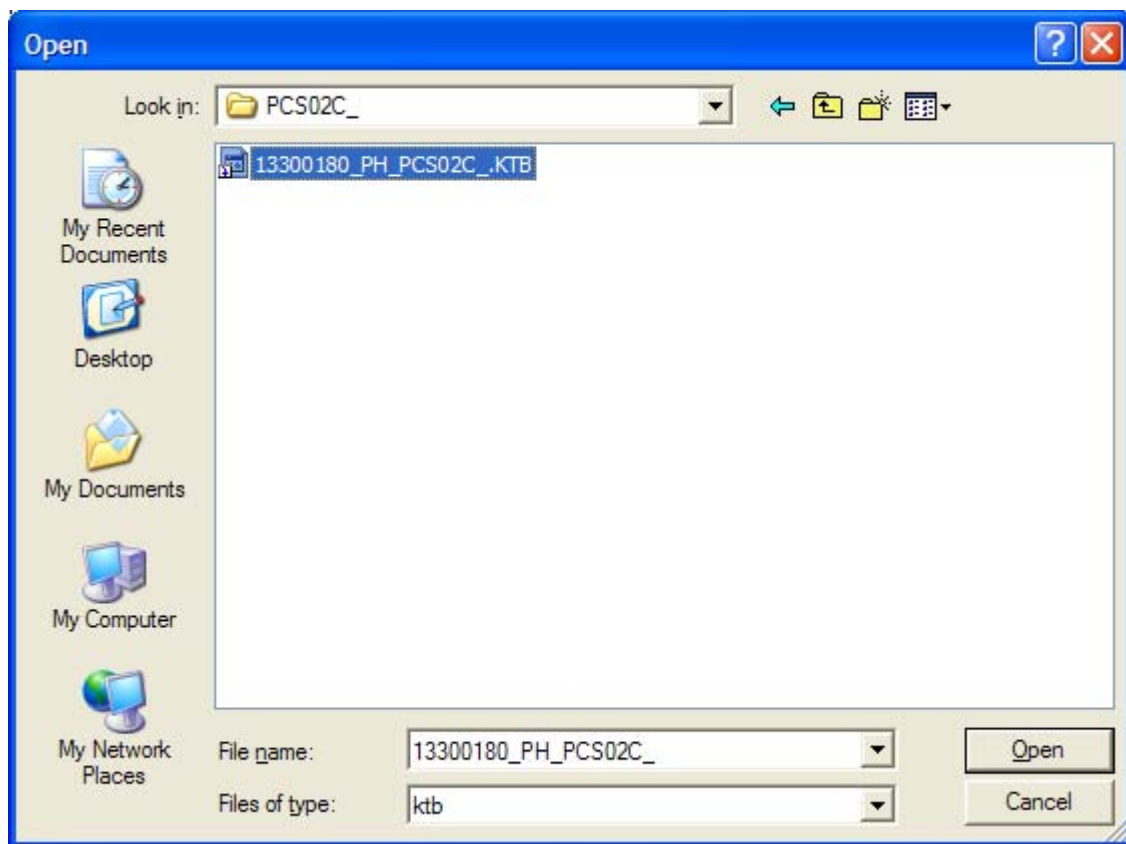
Buttons: Block New Calls, Allow New Calls, Backup EEPROM Data to PC, Restore EEPROM Data to CCFP, Clear Master EEprom, Transfer Flash Code to CCFP, Change Password, Restart System, Enter Pin Code, Pin Code Status, Set I/WU Card to Default settings

Retrive Default I/WU Settings: I/WU Card (All), Default Codes (selected), Optional Codes

Close button

- 3 In the **Advanced Options** tab, click **Transfer Flash Code to CCFP**.

An **Open** dialog box appears.



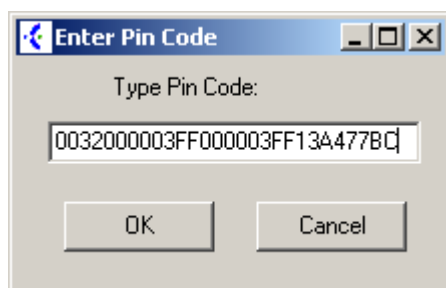
- 4 Select the flash code in question ((1330 0180.KTB), and then click **Open**. The flash software will be loaded to the system. Loading the flash can take a while.

- 5 In the **Advanced Options** tab, select the **Allow Subscription** checkbox.

Note: After registration of users you subscribe the handsets to the system. To make subscription, the system must allow subscriptions to be made.

- 6 In the **Advanced Options** tab, click **Enter Pin Code** to enter the 28 digit pin code. To get the pin code, please contact KIRK telecom Sales Support.

An **Enter Pin Code** dialog box appears.



Type the pin code, and then click **OK**.

- 7 Click **OK** to accept the code.
- 8 In the **Advanced Options** tab, click **Restart System**.
- 9 Click **Close** to return to the main window.
- 10 From the main window, click the **ISDN Registration** to register users.

	Serial No.	AC No.	Local No.	Standby text	PPID	CCFP
1	00077 0190256		300	ISDN 300	0	Solo/Master
2	00077 0624582		301	ISDN 301	1	Solo/Master
3	00077 0191287		302	test	2	Solo/Master
4						
5						
6						
7						

- 11 Under **Current User Data**, type the serial No., AC No., Local No. and Standby text, and then click **Create**.

Once the handset details have been entered into the registration screen of the Administration Program, the handset can be subscribed to the system. Subscription of handsets requires the use of each registered handset.

- 12 Close the Administration Program. The KIRK Wireless Server 1500 is now ready for use.
- 13 Subscribe each handset.

Refer to the Handset User Guide for further information about subscription.

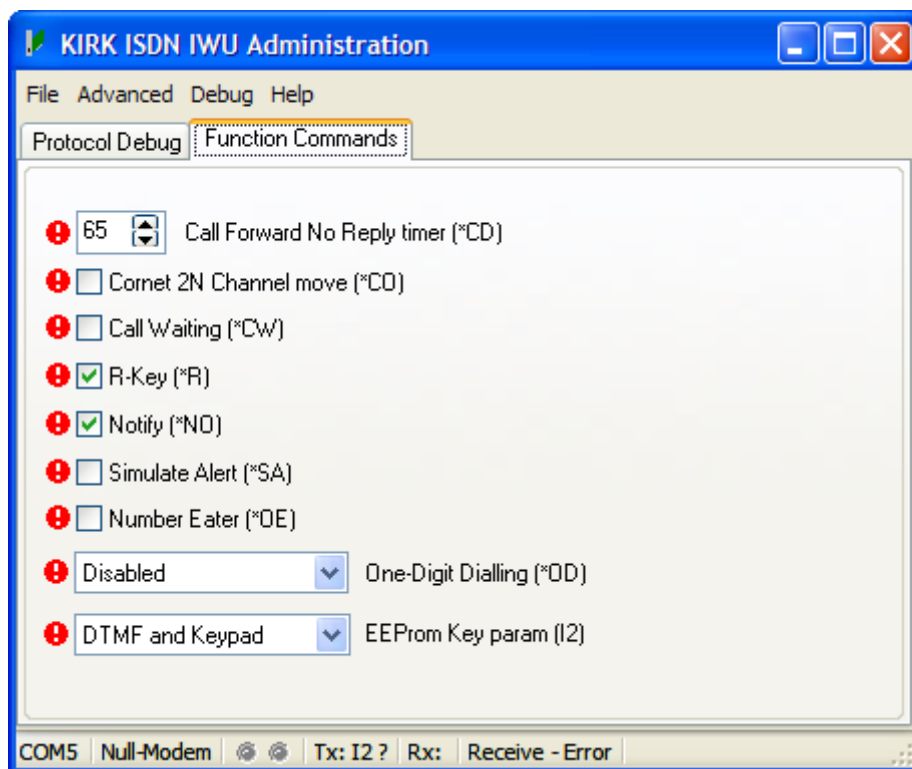
Note: To make subscription, the system must allow subscriptions to be made (see Step 5).


Configuring the ISDN IWU.

To change setting or upgrade the protocol software you use the administration software for the ISDN IWU. If not already installed, download the software from www.kirktelecom.com.

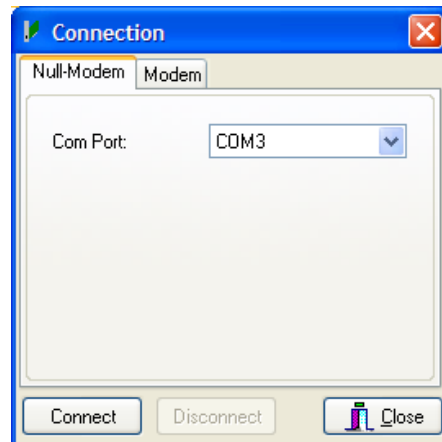
2.2 Setting up the connection

- 1 Connect the PC to the KIRK ISDN Interface Card (J5), and start the administration software.



If a  symbol is shown at each information in the main window and the status bar says "Receive - error". It indicates that the administration software is not able to get the current setting from the ISDN IWU card. In this case please make sure that the correct cable is used, proper inserted and the correct comport is selected.

2 Click **File>setup connection**.



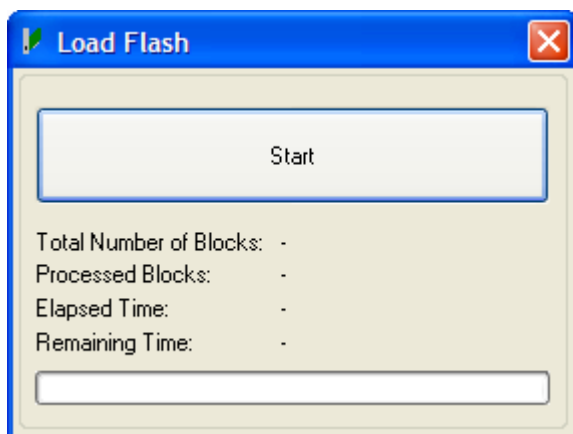
Click **Disconnect** and Select the correct com port. Click **Connect** and **Close**.

Note the "Receive – success" message on the status bar.

2.3 Uploading new flash software to the ISDN IWU card.

3 Click **Advanced** and select **Load Flash**.

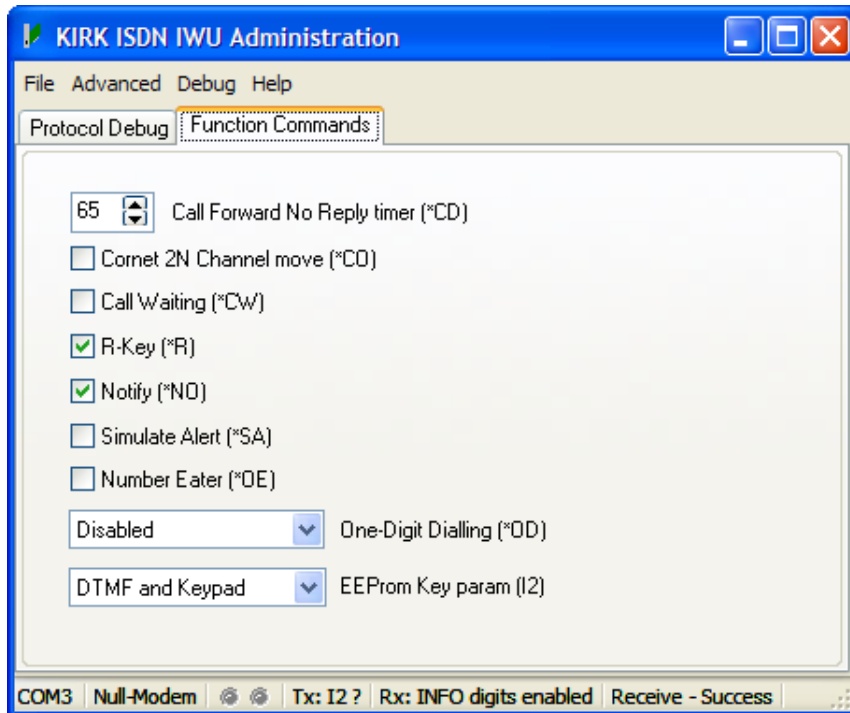
An **Flashload** dialog box appears.



4 Click **Start** and select the file to be downloaded and click **open**.

5 The download starts shortly after and takes 4 to 5 minutes. The entire KWS1500 needs to be restarted after the download.

2.4 Changing parameters and using feature.



When opening the administration software the program will with the Function Commands tab selected. Here it is possible to enable or disable a list of features.

1. Call forward and Call forward reply timer.

It is possible to activate call forward individual on each handset subscribed to the system. There is 3 different types of call forward available.

Call forward when Busy.

The call will in this setting only be forwarded to the individual programmed forward destination if the handset offhook or turned off. To activate this setting please see below.

Call forward no reply.

In the Administration software it is possible to set the no reply timer from 0 to 65 seconds. This value indicates for how long the handset alerts before the call is transferred to the individual programmed forward destination. The value for the no reply timer is a general value. It cannot be set individual for each handset.

Unconditional call forward.

This feature forwards all calls in all situations to the individual programmed forward destination.

2. how to activate call forward.

1. Press the menu button on the handset and select **EXT. SERVICE**
2. Select **CALL DIVERS.** and select the wanted type of call forward.
3. Select **FORWARD NUMBER** and type the wanted call forward destination number.

3. How to deactivate call forward.

1. Press the menu button on the handset and select **EXT. SERVICE**
2. Select **CALL DIVERS.** and select **OFF**.

4. Call Waiting ON/OFF.

To activate this feature set the call waiting checkbox on in the administration window. When call waiting is enabled a call waiting tone will be heard in the handset during a conversation when another party is calling you. To switch between the two conversations use the R-key. The enabling of call waiting is a general setting and affects all handsets in the system.

5. R-Key ON/OFF.

To limit the functionality on the system it is possible disable the R-key function on the handsets. When the checkbox is set on, the R-key is enabled. This feature is a general setting and affects all handsets in the system.

6. Notify ON/OFF.

This setting is mainly used to adapt to Alcatel and Avaya PBX. When the Notify checkbox is set on the ISDN IWU card sends a notify user hold or a notify user retrieval (ISDN layer 3 message) during a call transfer. When set to off the Notify messages are not send. Experience has shown that Alcatel and Avaya PBX react to these messages by disconnecting the call.

7. Simulate Alert.

The Simulate Alert setting makes the ISDN IWU card to send the Alerting message faster to the PBX to open the speech channel. Under normal conditions this is always set to off.

8. Number Eater.

This feature deletes the first digit on outgoing calls. Calls from handset to handset are not affected. When the checkbox is set to on the number eater is enable. Example: Number dialled: 12345. Number transferred to the ISDN interface: 2345.

9. One digit dialling.

This feature makes it possible to select what digit should be used for outgoing prefix. When a number is dialled beginning with this digit the call is transferred directly to the ISDN interface without first being analyzed in the internal numbering plan. This is typically used to enable the user to hear the public trunk dial tone when pressing the outgoing prefix.

10. EEprom Key Param.

This setting defines if it should be possible to transfer key information during connect. Normally this should be possible to be able to use phone banking and other dial-in services. Under normal operations it does not cause any problems enabling both DTMF and Keypad information.

11. Default and preset setting.

In the administration software it is possible to preset all the features and setting. Select the **Advanced** menu and select the **Load settings** menu. Select the wanted group of settings and press **activate**.

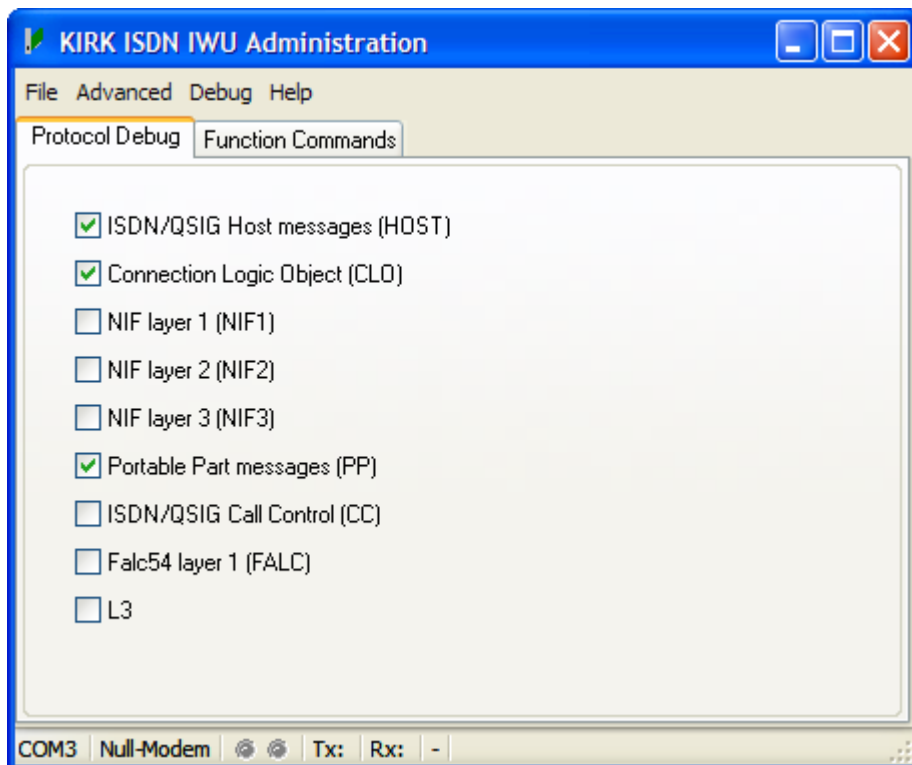
2.5 Debugging and how to Make a Trace

Making traces is useful when debugging the system in cases where there is incompatibility between the ISDN IWU card and a PBX.

In the Administration software it is possible to select a **Protocol debug** tab. Under normal operation all setting in this tab should be disabled.

1. How to generate a normal trace.

In situations where it is necessary to collect and send a trace to KIRKtelecom for closer investigation. It would normally require that **HOST**, **CLO** and **PP** trace information are enabled.



When this is done in the **Protocol debug** tab go to the **Debug** menu and select **Start Log To File**. Enter the name and path for the file to receive the trace information. Now try to do

the function that causes problems and try to do this in a situation where there is no other traffic on the system. Send the mail to KIRK. Remember to disable the trace information in the **Protocol debug** tab before shutting down the administration software.